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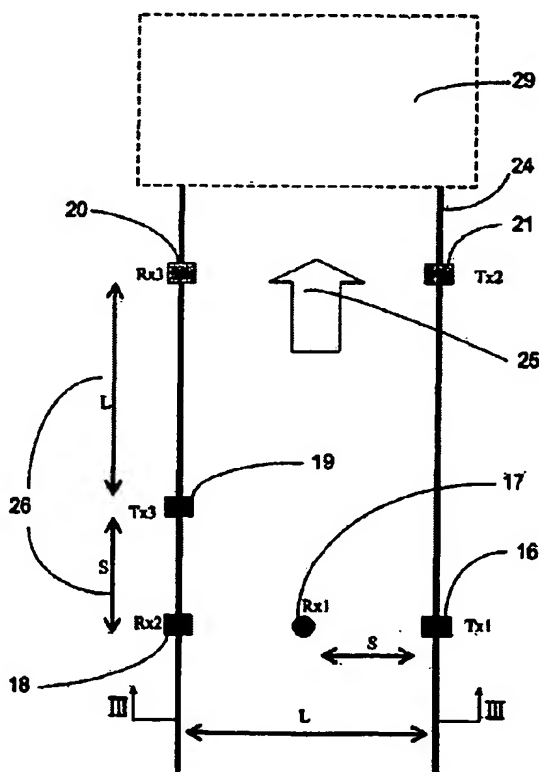
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(54) Title: A METHOD AND FLOW METER FOR DETERMINING THE FLOW RATES OF A MULTIPHASE FLUID



(57) **Abstract:** A method for determining the flow rates and/or composition of a fluid comprising a multi-component mixture of a gas and at least one liquid in a pipe comprises the following steps: electromagnetic loss and phase measurements are performed in at least two directions of the pipe; the degree of annular flow is determined based on the measurements of step a; the permittivity of the flow mixture is calculated based on the results from steps a and b, including corrections for the degree of annular flow; the mixture density is measured and compensated for the degree of annular flow; the temperature and pressure are obtained; the velocity of liquid and gas are determined, and based on the knowledge of densities and permittivities of the components of the fluid mixture, and the result from the above steps a-f, the volume and mass flow rates of the gas and liquid or liquids of the fluid mixture are calculated. A flow meter for performing the method is also disclosed.

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